

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/04084

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C12N5/08, C12N15/09, G01N33/50, G01N33/15, A61K35/39,  
A61P1/18, C12Q1/68, C12Q1/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C12N5/08, C12N15/09, G01N33/50, G01N33/15, A61K35/39,  
A61P1/18, C12Q1/68, C12Q1/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI (DIALOG), BIOSIS (DIALOG)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X/A	Luc BOUWENS et al., Islet Morphogenesis and Stem Cell Markers in Rat Pancreas., The Journal of Histochemistry and Cytochemistry (1996), Vol.44, No.9, pages 947 to 951	16,18/ 1-15,17,19
X/A	Henryk ZULEWSKI et al., Multipotential Nestin-Positive Stem Cells Isolated From Adult Pancreatic Islets Differentiate Ex Vivo Into Pancreatic Endocrine, Exocrine, and Hepatic Phenotypes., DIABETES, March.2001, Vol.50, No.3, pages 521 to 533	16,18/ 1-15,17,19
X/A	Eric HUNZIKER et al., Nestin-Expressing Cells in the Pancreatic Islets of Langerhans., Biochemical and Biophysical Research Communications (2000), Vol.271, No.1, pages 116 to 119	16,18/ 1-15,17,19

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
29 July, 2002 (29.07.02)

Date of mailing of the international search report  
13 August, 2002 (13.08.02)

Name and mailing address of the ISA/

Authorized officer

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/JP02/04084

**C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/15310 A (Univ Florida Res Found Inc.), 01 May, 1997 (01.05.97); & JP 11-514877 A	1-19

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/04084

## B x I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Pancreatic stem cells and markers thereof had been publicly known as stated in JP 11-514877 A, BIOSIS NO.:200000253457 & Biochem. Biophys. Res. Commun., Vol. 271, No. 1, p. 116-119 (2000), BIOSIS NO.:199699197107 & J. Histochem. Cytochem., Vol. 44, NO. 9, p. 947-951 (1996) and so on.

Such being the case, "pancreatic stem cells" per se and markers thereof cannot be considered as a "special technical feature". Thus, the claims have the following three groups of inventions.

(1) Claims 1 to 15, 17 and 19 relating to specific markers such as c-Met.

(2) Claim 16 relating to a method of screening a pancreatic stem cell differentiation inducer. (Continued to extra sheet.)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐

The additional search fees were accompanied by the applicant's protest.

☒

No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

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PCT/JP02/04084

Continuation of Box No. II of continuation of first sheet (1)

(3) Claim 18 relating to a method of screening a pancreatic function controller.